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A NEW SPECIES OF CHORIZANTHE (POLYGONACEAE: ERIOGONOIDEAE) FROM BAJA CALIFORNIA NORTE, MÉXICO

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ABSTRACT

A new species of *Chorizanthe*, *C. rosulenta*, is proposed. It is most closely related to *C. pulchella* Brandegee and may be readily distinguished by its rose-pink, fimbriate flowers. The new species is restricted to volcanic mountain slopes in central Baja California Norte, México.

KEY WORDS: Polygonaceae, taxonomy, *Chorizanthe*, México.

INTRODUCTION

As part of a revision of Polygonaceae Juss. subf. Eriogonoideae Meisner, reviews of the various genera are underway. The following new species of *Chorizanthe* R. Br. ex Benth. is proposed.

TAXONOMY

Chorizanthe rosulenta Rev., spec. nov.–TYPE: MÉXICO: BAJA CALIFORNIA NORTE: Along México Highway 1, 0.8 mi SE of Jaraguay on Jaraguay Grade, on gravelly volcanic soil associated with *Idria*, *Larrea* and *Ambrosia* at about 2700 ft elev, 29°37´N, 114°36´W, 23 Mar 1988, *Reveal et al. 6729* (holotype: MARY!; isotypes: ARIZ, ASU, BM, BRY, CAS, F, GH, K, MICH, MO, NY, ORE, RM, RSA, US, UTC, WIS).

A *C. pulchella* floribus rosulentibus et fimbriatus differt.

Spreading, sparsely pubescent annual herb 0.3-0.8 (1) dm high and 0.5-3 (3.5) dm across; *leaves* basal, narrowly oblanceolate, the blade 0.5-1.5 (2) cm long, 2-4 (5) cm wide, thinly pubescent on the upper surface, more densely so to nearly tomentose below, acute apically and tapering basally to a winged petiole 0.5-2 cm long; *flowering stems* mostly 3, dichotomously branched, spreading, 0.5-5 cm long, reddish; *branches* dichotomous, the secondaries suppressed, reddish; *inflorescences* cymose; *bracts* 2, opposite, 2-4 mm long, acicular, thinly pubescent and reddish, the awns 0.5-1 mm long, straight, glabrous and ivory-colored; *involucres* solitary, narrowly turbinate, 3-angled but 6-ribbed, the tube 3-4 mm long, thinly pubescent with curly hairs, greenish to reddish, corrugate, without a scarious margin but with a minute hyaline one between the margins of the major teeth, the teeth of two sizes, the larger three prominent and thickened basally, 1.5-3 mm long, divergent, with a short curved awn 0.3-0.7 mm long, the smaller three 0.2-0.4 mm long, divergent, awnless; *flowers* exserted from the involucre, cylindrical, 4.5-6 mm long, the tube yellowish at the very base, otherwise rose-pink, the lobes rose-pink, glabrous, on pedicels 0.4-0.5 mm long, the tepals monomor-

phic, oblong, marginally fimbriate near the base of the free portion, united about a third of their length; *stamens* 9, mostly included, the filaments 2-3 mm long, white, glabrous, the anthers 0.5 mm long, oval, yellowish-white; *achenes* brown, narrow, 3.5-4 mm long, glabrous, the narrow base tapering to a slightly 3-angled beak, the embryo straight; $n = 20$.

Specimens Examined. – MÉXICO. Baja California Norte: 10 mi S of Rancho Santa Catarina on Canoas Road, 325 m elev, 29°36´N, 115°07'W, 28 Mar 1970, *Moran 17034* (ARIZ, COLO, LL, MSC, RSA, PH, SD, UC); top of Jaraguay Grade, 875 m elev, 29°37´N, 114°37´W, 24 Feb 1973, *Moran & Reveal 20254* (RSA, SD, US); 6.4 mi SE of Jaraguay and 16.3 mi NW of Nueva Chapala, above Arroyo Rincanado, 2700 ft elev, 29°35´N, 114°33´W, 23 Mar 1988, *Reveal et al. 6727* (ARIZ, BM, BRY, CAS, MARY, MICH, MO, NY, RM, RSA, US, WIS).

Since Goodman (1934) revised the North American species of *Chorizanthe* only three new species have been described, the Baja California Norte endemic *C. turbinata* Wiggins (1941), and the California endemics *C. ventricosa* Goodman (1939) and *C. blakleyi* Hardham (1964). Specimens of these species were unknown to Goodman prior to 1934. Consequently, the finding of a fourth new species, now some fifty-five years since Goodman's revision, is both a surprise and an indication of the thoroughness of his revisionary efforts during an economically depressed era. And what is added embarassment on my part is that Reid Moran and I found *C. rosulenta* in 1973. At that time Moran noted its distinctiveness but I ignored his remarks when reviewing specimens of *Chorizanthe* in 1987. I was therefore unprepared when the plant was recollected in March of 1988.

Upon reexamining the plant near the spot where Moran and I had found it fifteen years earlier, its uniqueness was immediately apparent. The broad, distinctly 3-lobed involucre (the remaining three lobes are highly reduced) and non-glandular hairs associated it with that group of Baja California species characterized by *C. pulchella* Brandegee. Its rose-pink flower color, unlike the white lobes and yellow tube of *C. pulchella*, is more akin to that of *C. turbinata* and *C. mutabilis* Brandegee. The tepals of the latter two are entire and thinly pubescent while those of *C. pulchella* are finely laciniate with numerous glabrous linear segments. The glabrous tepals of *C. rosulenta* are fimbriate and much more like those of *C. fimbriata* Nutt. var. *fimbriata*. However, while the tepals of Nuttall's well-known species are fringed the entire length of their free portion, those of *C. rosulenta* are fringed only at the base. The upper entire portion of the tepal is reminiscent of that of *C. turbinata*. Goodman (1934) referred *C. pulchella*, *C. mutabilis* and *C. flava* to the subsect. *Flavae* while *C. fimbriata* was placed in his subsect. *Staticoideae*. *Chorizanthe fimbriata* may be readily distinguished from *C. pulchella* and its allies by the presence of glandular hairs interspersed among non-glandular ones.

The range of *Chorizanthe rosulenta* is still imperfectly known. At present the plant appears to be restricted to the red volcanic mesas and ridges that overlay the more picturesque decomposed granitic boulders that so characterize the *Idria* and *Pachycereus* forests in the Cataviñá area. Access to the higher elevations in this region is limited, yet it is likely that *C. rosulenta* is rather common across the central and western ridge system situated between Cataviñá and Laguna Chapala. To the south, *C. pulchella* is widely distributed on mainly sandy soils from Nueva Chapala south to the Desierto el Vizcaíno region of northwestern Baja California Sur. *Chorizanthe mutabilis* appears to be restricted to the San Borja region east of Rosarito. To the north, *C. fimbriata* extends as far south as the Santa Cecilia region north of Cataviñá; it occurs mainly on sandy to gravelly soils of volcanic origin as far north as southern California. *Chorizanthe turbinata* is found on the ridges and mesas above the Pacific Ocean in a narrow band from near San Quintín south to east of El Rosario (Reveal & Hardham 1989).

As presently understood, the ranges of *Chorizanthe pulchella, C. turbinata, C. nutabilis* and *C. fimbriata* do not overlap that of *C. rosulenta* and in fact only *C. pulchella* and *C. nutabilis* are known to occur sympatrically although the range of *C. turbinata* is surrounded by that of *C. fimbriata*.

The voucher for the chromosome number is *Reveal et al. 6729*. The number of *Chorizanthe rosulenta* agrees with those known for its related species (Reveal & Hardham 1989).

In Wiggins' (1980) key to *Chorizanthe* of Baja California, the new species may be inserted following *C. turbinata* thusly:

Perianth lobes entire, yellow, barely exserted; involucral tube arachnoid-pubescent, its lobes broadly ovate, to 4 mm wide; sandy soil, vicinity of Rancho Mesquitál to San Ignácio; endemic to B.C.; Feb.-Apr. ..... *C. flava* Brandegee

Perianth lobes fringed, white or rose-pink, well exserted:

Perianth lobes white, laciniate; involucral tube lanate, 4-5 mm long, the prominent teeth 4-6 (9) mm long with a straight awn 0.5-1.5 mm long; sandy soil, vicinity of Laguna Chapala to Desierto de Vizcaíno; endemic to B.C.; Feb.-Apr. ..... *C. pulchella* Brandegee

Perianth lobes rose-pink, fimbriate; involucral tube thinly pubescent, 3-4 mm long, the prominent teeth 1.5-3 mm long with a curved awn 0.4-0.7 mm long; gravelly soil, near Jaraguay to N of Laguna Chapala. ..... *C. rosulenta* Rev.

The new species is named in honor my companion and colleague C. Rose Broome, and just incidentally, reflects the rose-pink color of the flowers.

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LITERATURE CITED

Goodman, G. J. 1934. A revision of the North American species of the genus *Chorizanthe*. Ann. Missouri Bot. Gard. 21: 1-102.

_____. 1939. A new species of *Chorizanthe*. Leafl. W. Bot. 2: 193-195.

Hardham, C. B. 1964. A new California *Chorizanthe*. Leafl. W. Bot. 10: 95-96.

Reveal, J. L. & C. B. Hardham. 1989. A revision of the annual species of *Chorizanthe* (Polygonaceae: Eriogonoideae). Phytologia 66: 98-198.

Wiggins, I. L. 1940. New and poorly known species of plants from the Sonoran Desert. Contr. Dudley Herb. 3: 65-84.

_____. 1980. Flora of Baja California. Stanford Univ. Press, Stanford.